

6PP

OPPT-2002-0060-0010

FINAL
INITIAL REVIEW ENGINEERING REPORT

CBI: Yes

PMN: 98-0823
PV (kg/yr):

ENGINEER: FA/DBS
SUBMITTER:

USE: Raw material for Nylon-12.

OTHER USES: Therapeutic use, amino acids with AET/HEMA effects in self-etching primer on bonding to dentin. Heme-coordinating analogs of lauric acid as inhibitors of fatty acid hydroxylation.

MSDS: Yes

Label: No

General Eqp.: heavy rubber gloves, chemical safety goggles, protective clothing and mask, local exhaust
Respirator: wear self-contained breathing apparatus; use respirator with suitable dust filters
Health Effects: mildly irritating to the skin; practically non-toxic
TLV/PEL (PMN or raw materials): not listed

CRSS:

Chemical Category: Dodecanoic acid, 12-amino-
Trade name: ADA

VP: 1.1E-05 torr @25°C

S-H₂O: 0.19 g/L

MW: 215.34

Phys State: neat solid (white flakes); end use destroyed

Consumer Use: No

SAT (concerns):

Related cases: P85-0633/P90-0669 (both are the identical compound)

Health: 1-2; Inhalation and drinking water. XB: Testing desired.

Eco: 2; All releases to surface waters. XB: Testing desired. Migration to ground water = moderate.

OCCUPATIONAL EXPOSURE RATING: 1-2



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2002 JUN 16 AM 10:00

ASSUMPTIONS: PMN will be imported, so manufacturing assessments were not prepared. The submission indicated a process release of the PMN to air, but did not appear to consider equipment cleaning or container residue. Assessments for container residue were calculated for each media, although the actual media of release is not known. A release from equipment cleaning was not assessed because little PMN is expected to remain after use; the PMN is destroyed upon polymerization.

POLLUTION PREVENTION CONSIDERATIONS: The same Nylon-12 derived from Laurolactam has been on the U.S. market.

EXPOSURE-BASED REVIEW

Yes (0 criteria met)

- | | |
|---|----|
| 1) # of workers exposed: <3 | No |
| 2) >100 workers with >10 mg/day inhalation exposure : | No |
| 3) (a) >100 workers w/1-10 mg/day inh. exp. & >100 days/yr: | No |
| (b) Routine Dermal Cont: >250 workers & >100 days/yr: | No |

PMN: 98-0823

PROC/USE: Raw material for Nylon-12.

Site/Location: 2 customer sites/Pampa, TX and Aberdeen, MS
Days/yr: 200 (submission)

Process Description: empty imported containers of powder ->
polymerization (with water byproduct) -> Nylon 12 (product)

ENVIRONMENTAL RELEASES (Eqpt. cleaning, container residue, etc.):

50 kg/site-day WATER over 200 Days/year

from: CEB estimate of from
container residue; the media to which this material is
released is not known

= 50 kg/site/day

Media of release is unknown - may be to INCINERATION or
LANDFILL instead

0.01 kg/site-day AIR over 200 Days/year

from: submission estimate of material entering a bag-
filter connected to the polymerization reactor

20,000 kg/yr INCINERATION

from: CEB estimate of from
container residue; the media to which this material is
released is not known - may be to WATER or LANDFILL
instead

20,000 kg/yr LANDFILL

from: CEB estimate of from
container residue; the media to which this material is
released is not known - may be to WATER or INCINERATION
instead

PMN: 98-0823

PROC/USE:cont'd

OCCUPATIONAL EXPOSURE

Tot. # of workers:

Days/yr:

Inhalation:

Number of workers with inhalation exposure:

Basis:

Dermal:

CBI CONTACT REPORT - TELEPHONE LOG

PMN: P98-0823

CALL BY: Doug Spengel (ERG) for EPA/OPPT/CEB

CALL TO: Keith Glynn

SUBMITTER:

PHONE NO:

DATE: 6/10/98

TIME: 3:00 p.m.

Doug Spengel left a message for Keith Glynn to call Doug back today, or to call Fred Arnold later in the week. The questions of interest were:

Q1: Will the PMN be imported directly to your customer's sites?

A1:

Q2: What type of shipping containers will be used to import the PMN? What will happen to these containers and any PMN residual that they contain?

A2:

Q3: Is any equipment cleaning performed that might generate a waste that contains the PMN?

A3:

Q4: Is there any chance that any of the PMN material will end up in the water by-product stream from the polymerization reaction?

A4:

Q5: Is the estimate of the number of workers for one processing site, or the total for both processing sites?

A5: